

## BLOOD LOSS DETECTION USING RETINAL VASCULOMETRY

### Abstract

This invention relates to a system, method and apparatus for assessing a patient's risk of cardiovascular collapse by measuring circulating blood volume through transpupillary measurement of retinal vasculature. The system is useful for predicting patients at risk of suffering hypovolemic shock, cardiogenic shock, anaphylactic shock, or septic shock. The system includes a light source, an optical assembly, an imaging device, a processor, and an output device. Images of the eye are obtained and analyzed using a software package. The measurements obtained are compared to a database to determine if the patient is at risk of suffering vascular collapse.

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